

THE TYPE-SPECIES OF THE GENERA *PHOXINELLUS*, *PSEUDOPHOXINUS* AND *PARAPHOXINUS* (PISCES, CYPRINIDAE)

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Phoxinellus Heckel, 1843 : 1040

At this place Heckel listed two species, both new, *P. zeregi* and *P. alepidotus*. *P. alepidotus* was described on the same page; it had already been named on p. 1011, as an example of species having a certain type of pharyngeal teeth. *P. zeregi* was first described on p. 1063. If we were obliged to rely on this publication it would be allowable to have recourse to page-priority, regard *P. zeregi* as a nomen nudum on p. 1040 and adopt *P. alepidotus* as type-species.

Bleeker early (1860a : 423-4) made a formal decision in this sense; he defined *Phoxinellus* and referred to *P. alepidotus* as the typical European species ("de typische¹ europesche soort"); he noted that *P. zeregi* should be placed in a separate genus, for which he proposed the name *Pseudophoxinus*.

In the same year Bleeker (1860b) published a "Conspectus systematis Cyprinorum" in which, though citing no type-species, he defined these two genera in terms consonant with his designation of the respective type-species in 1860a.

In 1863 Bleeker deliberately changed his mind and designated *Phoxinellus zeregi* as "spec. typ." of *Phoxinellus*, citing *Pseudophoxinus* Bleeker as a junior synonym. This appears in three publications of 1863 (1963a; 31; 1863b: 263; 1863c: 209) and in each he proposed a new genus, *Paraphoxinus*, with *P. alepidotus* as type-species.

This is of course inadmissible and Jordan (1919) in 'The genera of fishes' came to this conclusion without citing all the evidence. He in fact recorded the proposal of *Pseudophoxinus* as in the publication here cited as 1860b, noting that no type-species were named in this brief conspectus and stating that they were supplied in the "Atlas" of 1863. He seems to have overlooked our '1860a' and 1860b is wrongly given the date 1859 (which belongs only to the first half of the same volume). Perhaps Jordan was relying on Bleeker's own confession, "Blkr. ol." (Bleeker, formerly), in the publications of 1863. I have not been able to discover in the works of either Heckel or Bleeker any reason for Bleeker's change of mind.

The present note, then, confirms Jordan's view, by giving the evidence, that the only acceptable conclusion is the following:

Phoxinellus Heckel, 1843, type-species *P. alepidotus* Heckel designated by Bleeker, 1860; synonym *Paraphoxinus* Bleeker 1863.

Pseudophoxinus Bleeker, 1860, type-species by monotypy and original designation *Phoxinellus zeregi* Heckel = *Pseudophoxinus zeregi*.

¹ This can only mean 'type-species'. The other sense of 'typical of the European spp.' could only be assumed if other European species had been known at that time, and this was not so.

Bleeker in his three relevant statements of 1863 did not give the reference to his earlier (1860) designations and his second thoughts have unfortunately been followed by most authors, among them Steindachner (1882), Pellegrin (1923), Berg (1932, *Zoogeographica*), Karaman (1924), Tortonese (1938), Steinitz (1953) and Ladiges & Vogt (1965). Only Günther (1868) used *Pseudophoxinus* as a subgenus (of *Leuciscus*) with the single species '*Leuciscus zeregi*', but he banished *Phoxinellus* altogether by using *Paraphoxinus* for *P. alepidotus* and putting *Phoxinellus* in the synonymy of both *Leuciscus* and *Paraphoxinus*!

The taxonomy of these little circum-Mediterranean Cyprinidae is very unsettled, and authors who have recognized *P. alepidotus* and *P. zeregi* as type-species of distinct genera have not agreed on the limits or definition of the genera, either with regard to each other or in relation to *Pararhodeus* Berg and *Rutilus* (especially *R. tricolor* (Lortet); but see Banarescu, 1960 : 67 and 119). The type-species of *Phoxinellus*, *P. alepidotus*, belongs to a group of populations characterized by various degrees of reduction of the squamation, associated with life in water whose course runs now in the open, now underground in limestone country in Yugoslavia. Even the specific boundaries are in doubt and the generic value of the reduction of scales is questionable. The problem has been stated by some of the authors mentioned above.

To avoid misunderstanding I should say that I have no plans to work towards a solution myself. The need to consider *P. zeregi* in another context prompted me to look into the nomenclature.

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